Structure of Primary Care and Diabetes/Chronic Illness Outcomes

George L. Jackson, Ph.D., MHA – Merit Review Entry Program

VA and Duke University Medical Centers – Durham, North Carolina, USA

MREP Award

- **Focus:** Impact of the organization of primary and specialty care on chronic illness outcomes, especially for diabetes
- **Dates:** January 1, 2006-December 31, 2008
- **Mentors:** David Edelman, MD, MHS; Morris Weinberger, Ph.D.; Elizabeth (Becky) Yano, Ph.D.
- **Consultants:** Jeanne Kemppainen, Ph.D., RN, CS; Edward Wagner, MD, MPH
- **Additional collaborators:** Steven Grambow, Ph.D.; Thomas (Bob) Konrad, Ph.D.; Shoou-Yih Daniel Lee, Ph.D.; Jeffrey Murawsky, MD; Dawn Provenzale MD, MS; Ramon Velez, MD, MPH, MS

Context

- Approximately 20% of VA patients have diabetes.
- The Chronic Care Model (CCM) provides a type of meta-guideline for diabetes care that suggests optimum care is likely provided by organizations connected to the community, which focus on providing self-management support through organizations with delivery systems designed around care teams that have access to evidence-based decision support linked to clinical information systems.
- Despite wide-spread acceptance of the CCM, little is known about differences in how providers, nurses, and patients perceive implementation of CCM elements and which specific elements may be associated with better diabetes outcomes.

Chronic Care Model

Diagram from Wagner (1998)

Sample Publications

(articles featured in the national HSR&D diabetes Health Spotlight, Nov. 2006)

1. Jackson GL, et al. Veterans Affairs primary care organizational characteristics associated with better diabetes control. *Am J Manag Care.* 2005;11(4):225-237.
2. Jackson GL, Edelman D, Weinberger M. Simultaneous control of intermediate diabetes outcomes among veterans affairs primary care patients. *J Gen Intern Med.* 2006;21(10):1050-1056.

Submitted IIR

As part of the MREP process, a study has been submitted with the goal of addressing the following questions:

1. What is the level of agreement among primary care providers (physicians/mid-level providers), nurses, and patients regarding the extent to which diabetes care approximates optimal chronic illness care?
2. What combination of CCM elements is associated with better outcomes among patients with diabetes?

Methods for Proposed Study

Cross-sectional mailed survey conducted among primary care providers (PCPs), nurses, and patients with diabetes at each facility in two Veterans Integrated Service Networks (VISNs).

Setting

1. VISN 6 (North Carolina and parts of Virginia and West Virginia)
   - 8 medical centers and 11 Community Based Outpatient Clinics (CBOCs)
2. VISN 12 (Chicago area, eastern Wisconsin, and Upper Peninsula of Michigan)
   - 7 medical centers and 30 CBOCs

Individuals to be surveyed

For each facility in the VISNs (medical centers and CBOCs):

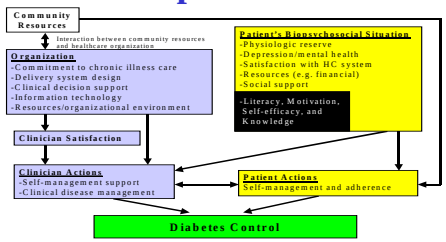
1. All PCPs [attending physicians, mid-level providers] with panels of assigned patients in the primary care program
2. All nurses who work at least half of their duty hours in primary care programs
3. Random sample of patients who receive most of their primary and diabetes care from a specific VISN facility
   - To achieve an estimated sample size of 50 patients per facility, 90 patient surveys will be mailed.

Intermediate Outcomes

For one year covering six months before and after the completion of the patient survey, mean of each of the following:

1. Hemoglobin A1c
2. Systolic blood pressure
3. LDL-cholesterol

Conceptual Model



Proposed Measures

Implementation of CCM Elements

- Assessment of Chronic Illness Care (ACIC) [measure of implementation of CCM elements for staff]
- Patient Assessment of Chronic Illness Care (PACIC) [measure of implementation of CCM elements for patients]
- 5A's Patient Centered Counseling [measure of self-management support received by patients]

Additional Measures Address

- Primary care organizational environment
- Patient and staff satisfaction
- Patient and staff demographics
- Patient co-morbidities, social support, mediation adherence, BMI, and prescribed medication

Pilot

Design

- Survey of all PCPs (19) and nurses (8) and a sample of 300 patients with diabetes in one primary care clinic at a tertiary care VA medical center

Results

- Response rate: Patients = 68%; Nurses = 75%; Providers = 53%
- Providers and nurses reported a greater difference for clinical decision support than other CCM elements (e.g. information systems)
- Patients indicated that the system provided less follow-up than other CCM elements (e.g. problem solving)
- African-Americans and patients with lower levels of education were more likely to report higher levels of CCM implementation (PACIC summary score)

Related Research

Cancer Care Quality Measurement System

Dawn T. Provenzale, MD, MS, Principal Investigator
George L. Jackson, Ph.D., MHA, Project Director and Co-Investigator

The C4 Cancer Care Quality Measurement System (CCQMS) will map CRC care in the VA to the National Comprehensive Cancer Network practice guidelines to:

- ➢ Identify facility-level gaps in patient care
- ➢ Determine any facility-level deviations from established standards of care
- ➢ Identify national VA-system gaps in patient care and deviations from established standards of care

The CCQMS is currently being used by 31 VA facilities (at least 1 per VISN) to measure the quality of colorectal cancer care. Planning is underway to extend use of the CCQMS into the Department of Defense.

Sample Report Based on Pilot Cases Entered in the CCQMS

Proportion of patients with resected colon cancer with ≥12 lymph nodes examined by pathology.

- Mean for All Facilities = 26%
- Median for All Facilities = 20%
- Proportion of All Patients for All Facilities = 25%

Funding: HSR&D (CRT-05-338); NCI/HSR&D (IAG YI-PC-6039-01)

Colorectal Cancer Care Collaborative (C4)

- Aim: Improve diagnosis and treatment of CRC through system redesign
- Partnership among:
  - ➢ VA Health Services Research & Development
  - ➢ VA Office of Quality and Performance
  - ➢ VA System Redesign/Advanced Clinic Access Program
  - ➢ VA Office of Patient Care Services
- Two phases:
  1. Screening Result ⟶ Diagnosis
     - ➢ September 2005-Fall 2006
  2. Cancer Treatment
     - ➢ Spring 2007-Spring 2008
- 31 VA facilities seeking to improve CRC care (at lease 1 per VISN)